City of Weslaco

Water Treatment Plant Update

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CDM

Presentation Outline

- Project Background
- Objectives of current project
- Tasks for current project
- Current Status of Project
- Recommendations
- Schedule for remaining project
- Questions

Project Background

- 2007 Bond Program for water & sewer projects originally included:
  - Water treatment plant project
  - Wastewater treatment plant project
  - Lift station projects
  - Collection system projects
- What was implemented from the 2007 bond program:
  - Emergency projects on lift stations
  - Wastewater treatment plant projects
  - All designs for all projects
  - Preliminary engineering report for the water treatment plant

Project Background

- 2007 Bond Program Water Treatment Plant (WTP) Preliminary Engineering Report (PER) scope of work:
  - Determine if 2 million gallons per day (MGD) of additional capacity could exist at the existing WTP with only minor improvements.
  - 1.5 MGD of additional capacity was identified for approximately $2M

Objective of Current WTP PER

- Determine the needs for the WTP for the next 20 years

Tasks for Current Project

- Task 1: Water Demands
  - How much water is needed for the next 20 years?
- Task 2: Water Rights
  - How much water do you need to make sure you can meet the demands?
- Task 3: Water Treatment Plant Assessment
  - How should the WTP be expanded?
- Task 4: Distribution System Assessment
  - Once we expand the WTP can we get the water to where it is needed within the City?
- Task 5: Debt Capacity Assessment
  - How much does all of this cost and how do we pay for it?

Status Update: Historical use of water?

Year	Average Day Production (MGD)	Maximum Day Production (MGD)	Existing Treatment Capacity (Plant & Well) MGD)	Percent of Rated Plant Capacity Based on Maximum Day Production
2006	5.27	7.74	8.12	95%
2007	4.39	7.80	8.12	96%
2008	4.67	6.69	8.12	82%
2009*	5.88	9.74	8.98	108 %
2010*	5.14	7.69	8.98	86%
5-yr Average	**5.07**	**7.93**	**8.46**	**93%**

*2009 & 2010 include the groundwater well at the WTP

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2010*			8.98	86%
5-yr Average	**5.07**	**7.93**	**8.46**	**93%**

The wet years are unusual. If normal years then average would be more than 95%!

Status Update: How much water is needed?

Year	Population Projection	Total Connections	Total Average Daily Demand (MGD)	Total Max Day Demand (MGD)
2015	38,100	14,654	10.20	16.32
2020	42,150	16,211	11.28	18.05
2025	46,570	17,911	12.47	19.95
2030	51,650	19,865	13.83	22.12

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Current capacity of WTP and well is 8.98 MGD

Status Update: How much raw water do you own & what has the historical use been?

Year	Total Average Annual Raw Water Pumpage (acre-feet per year)	Total Allocated Water Rights (acre-feet/year)	Water Rights Remaining (acre-feet)
2006	6,115	7,194	1,079
2007	5,802	7,194	1,392
2008	6,238	7,194	956
2009*	6,955	8,162*	1,207
2010*	6,081	8,162*	2,081

*Includes the groundwater well at the WTP

Status Update: How much raw water will you need in the future?

Year	Population	Total Average Annual Demand (acre-feet/year)	Total Allocated Water Rights (acre-feet/year)	Water Rights Deficit (acre-feet/year)
2015	38,100	11,424	8,162	-3,262
2020	42,150	12,639	8,162	-4,477
2025	46,570	13,964	8,162	-5,802
2030	51,650	15,487	8,162	-7,325

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Between 3,300 and 4,000 acre-feet per year in additional water rights by 2015

Status Update: How much water is available to purchase as of April 2011?

Current Water Right Classification	Total Available Water Rights (acre-feet)	Municipal Conversion Water Rights (acre-feet)	Low End Total Cost (Thousands)	High End Total Cost (Thousands)
Class A	1,600	800	$980	$1,197
Class B	1,390	556	$605	$756
Municipal	200	200	$245	$299
Total	**3,280**	**1,556**	**$1,830**	**$2,252**

Water rights availability come and go – so be sure to stay in regular contact with the Hidalgo & Cameron Counties Irrigation District No. 9

Status Update: Where are we with remaining tasks?

- Task 3: Water Treatment Plant Assessment: How should the WTP be expanded?
  - We have developed some alternatives and broad costs for each alternative
  - We are determining the most efficient alternative.
- Task 4: Distribution System Assessment: Once we expand the WTP can we get the water to where it is needed within the City?
  - We have completed this task and identified additional elevated storage tanks as well as new transmission mains.
- Task 5: Debt Capacity Assessment
  - We are collecting data from the City and beginning this task

Current Recommendations

- Expand the WTP by 8.0 MGD
- Purchase the 200 acre-feet of municipal water rights
- Continue with the meter replacement program
- Implement a more aggressive water conservation plan
  - Recycle of wastewater for irrigation
  - More public awareness
  - A good conservation program ***could*** defer your next phase of the expansion for as many at 5-10 years

Schedule for Remaining Project

- Finalize Tasks 3 & 5 over the next month
- Turn in a report in August

Questions